output impedance and a high gain. The arrangement of resistor 160 ("R1"), resistor 165 ("R2"), and the op amp 155 forms an inverting amplifier circuit having an output voltage, V_{out} approximately equal to

$$V_{out} = -(R2/R1)*V_{bias}$$

where V_{bias} is the voltage of the voltage bias source 135. This approximation is good when the gain of the op amp 155 is a few orders of magnitude larger than R2/R1. When negligible current flows through the resistor 130, the gate bias voltage at the gate of transistor 115 is approximately equal to the output voltage V_{out} of the active element circuit 140. The actual value of resistors 160 and 165 are dependent on the desired operating characteristics of the amplifier circuit 110. For example, when resistors 160 and 165 have equal resistance, a gate voltage bias of -1.5 V can be achieved by using a voltage bias V_{bias} of 1.5 V.

IN THE CLAIMS

Please amend the following claims as shown below, without prejudice (marked-up versions appear in the attachment entitled "AMENDMENTS WITH VERSION MARKINGS"):

1. (Amended) A biasing circuit for biasing a device used for amplifying a radio frequency (RF) signal, the RF signal comprising an amplitude modulated carrier having an amplitude modulation bandwidth, the biasing circuit comprising:

an active element having an input and an output, wherein during its operation the active element maintains a relatively low output impedance over a bandwidth comparable to the amplitude modulation bandwidth; and

a resistor having an input connected to the active element output, wherein a direct current (DC) bias voltage applied at the active element input produces a fixed DC voltage at the resistor input.